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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,559	09/30/2003	Philippe Gambier	68.0412	6528
35204	7590	12/01/2006	EXAMINER	
SCHLUMBERGER RESERVOIR COMPLETIONS 14910 AIRLINE ROAD ROSHARON, TX 77583				MILLER, WILLIAM L
		ART UNIT		PAPER NUMBER
		3677		

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**

Application Number: 10/675,559

DEC 01 2006

Filing Date: September 30, 2003

**GROUP 3600**

Appellant(s): GAMBIER, PHILIPPE

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Dan C. Hu  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 08-28-2006 appealing from the Office action mailed 03-28-2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The appellant's statement that no amendment was filed after final rejection is inaccurate as an after-final amendment, which did not amend the claims but included a request for reconsideration, was filed 05-25-2006. The request for reconsideration was considered but did not place the application in condition for allowance, and thus an advisory action was mailed 06-06-2006.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

3,298,716	TAYLOR ET AL.	1-1967
6,861,131	EVANS	3-2005
6,384,128	WADAHARA ET AL.	2-2002

Admitted Prior Art ("APA"), see "Related Art" section of instant specification

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3, 6, 15-16, 20, 28, 29, and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (hereinafter "APA") in view of Taylor et al. (US#3298716).

The APA, namely the "Related Art" section of the appellant's specification, discloses an apparatus comprising: a cable or control line (e.g. hydraulic, fiber optic, electric, and combinations thereof) having an inherent outer surface; and a seal assembly including a housing and rubber or elastomeric seals, metal-to-metal seals, or seals that rely upon fluid pressure. Thus, the APA fails to disclose the sealing assembly including a thermoplastic seal and adjacent ferrule, and a preload member (threaded mandrel) for inducing cold flow of the thermoplastic seal. However, such a seal assembly is known as Taylor discloses a seal assembly comprising: a housing 6; a thermoplastic seal 19; metal ferrules 11,12 abutting ends of the seal; and a preload member 1, namely a threaded pipe/mandrel, which applies a force to induce cold flow of the thermoplastic seal (col. 2, lines 64-72). Therefore, as taught by Taylor, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the APA by utilizing a seal assembly including a thermoplastic seal and adjacent ferrule, and a preload member (threaded mandrel) for inducing cold flow of the thermoplastic seal for improved sealing between the housing and cable or control line.

Claims 8-13, 21-26, 30-35, and 40-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA in view of Taylor et al., and further in view of Evans (US#6861131).

Regarding claims 10-13, 23-26, 32-35, and 42-45, the APA as modified by Taylor discloses the seal as being made of the same material as the elements 7 and 8, thus the seal is any thermoplastic material resistant to corrosive conditions, such as polypropylene (col. 2, lines 20-23). The APA as modified by Taylor thus fails to disclose the thermoplastic material as PEEK, PEK, PPS, or PEKEEK as claimed by the appellant. However, the specific thermoplastic material is not a critical feature of the appellant's invention, and the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). In any event, Evans teaches in col. 11, lines 20-36, that polypropylene, PEEK, PEK, PPS, and PEKEEK are known thermoplastic equivalents. Therefore, since the APA as modified by Taylor invites the usage of thermoplastic materials other than polypropylene, and Evans teaches that polypropylene, PEEK, PEK, PPS, and PEKEEK are known thermoplastic equivalents, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the APA as modified by Taylor in view of the teachings of Evans such that the thermoplastic material was PEEK, PEK, PPS, or PEKEEK for the inherent material properties thereof.

Regarding claims 8, 9, 21, 22, 30, 31, 40, and 41, since the APA as modified by Taylor and Evans discloses the thermoplastic material as PEEK, PEK, PPS, or PEKEEK, then this thermoplastic material inherently possesses the claimed tensile modulus range and flexural modulus range.

Claims 8, 9, 14, 21, 22, 27, 30, 31, 36, 40, 41, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA in view of Taylor et al., and further in view of Wadahara et al. (US#6384128).

Regarding claims 14, 27, 36, and 46, the APA as modified by Taylor discloses the seal as being made of the same material as the elements 7 and 8, thus the seal is any thermoplastic material resistant to corrosive conditions, such as polypropylene (col. 2, lines 20-23). The APA as modified by Taylor thus fails to disclose the thermoplastic material as PET as claimed by the appellant. However, the specific thermoplastic material is not a critical feature of the appellant's invention, and the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). In any event, Wadahara teaches in col. 9, lines 18-29, that polypropylene (along with PEEK, PEK, PPS) and PET are known thermoplastic equivalents. Therefore, since the APA as modified by Taylor invites the usage of thermoplastic materials other than polypropylene, and Wadahara teaches that polypropylene and PET are known thermoplastic equivalents, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the APA as modified by Taylor in view of the teachings of

Wadahara such that the thermoplastic material was PET for the inherent material properties thereof.

Regarding claims 8, 9, 21, 22, 30, 31, 40, and 41, since the APA as modified by Taylor and Wadahara discloses the thermoplastic material as PET, then this thermoplastic material inherently possesses the claimed tensile modulus range and flexural modulus range.

#### **(10) Response to Argument**

Regarding independent claims 1, 15, 28, and 38, the appellant argues the examiner has failed to cite any motivation or suggestion to combine the teachings of the APA and Taylor, and therefore a *prima facie* case of obviousness has not been established.

As previously stated in the advisory action mailed 06-06-2006, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner acknowledges the teaching reference of Taylor does not disclose sealing against an outer surface of a cable/control line, however Taylor is not required to disclose sealing against an outer surface of a cable/control line as the base reference of the APA discloses this limitation. Taylor has been applied as a teaching reference for replacing the APA seal with a thermoplastic seal, ferrule, and preload member for inducing cold flow of the seal. The motivation or suggestion for the combination is at least found in the knowledge generally available to one of ordinary skill in the art. Moreover, per knowledge generally available to one of ordinary skill in the art, the

replacement of the APA seal (rubber or elastomeric seals, metal-to-metal seals, or seals that rely upon fluid pressure), which the appellant admits of its shortcomings and subject to failure (see spec page 2, line 12, thru page 3, line 5), with the Taylor seal (a thermoplastic seal, ferrules, and preload member for inducing cold flow of the seal), would function to improve sealing between the housing and cable or control line of the APA. The improvements known or found in knowledge generally available to one of ordinary skill in the art include, but are not limited to: corrosion resistance via the thermoplastic seal material; enhanced pressure-tightness and thus sealing via the cooperation of the preload member, ferrules, and resulting cold flow of the thermoplastic seal; and ease in assembly/dissassembly via the structural cooperation of the preload member, ferrules, and thermoplastic seal.

Regarding Evans and Wadahara, the appellant argues there is no suggestion to combine their teachings with the APA and Taylor, as both Evans and Wadahara are unrelated to downhole applications.

The examiner agrees Evans and Wadahara are not of the same field of endeavor as the appellant's invention, namely downhole applications, but they are from a similar problem solving area, namely thermoplastic materials and the inherent material properties thereof. Evans and Wadahara were applied to establish material equivalents as the APA in view of Taylor discloses a thermoplastic seal resistant to corrosion, such as polypropylene. Evans and Wadahara establish polypropylene is a material equivalent with the various claimed thermoplastic materials, and as previously stated, the APA in view of Taylor invites the usage of other thermoplastic materials for the seal.

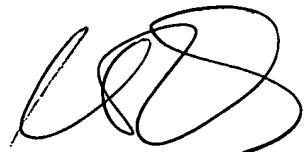
Regarding the criticality of the seal material, the specific thermoplastic material of the seal cannot be viewed as a critical feature of the appellant's invention as the claims offer five different thermoplastic material choices.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



William L. Miller

Primary Examiner, Art Unit 3677

Conferees:

Judy Swann 

Daniel Stodola 